Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2420	chitinase$1 or chitotriosidase$1	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:13
L2	39	1 near4 human	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:13
L3	66	1 same (culture adj medi$4)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:18
L4	88	1 same (cosemetic$1 or dental or toothpaste$1 or food)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:19
L5	212	1 same antifung$	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:20
L6	18	5 same (human or mammal$)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:21
L7	53946	drug same (deliver$ or release or implant)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:23
L8	13	1 same 7	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:23

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2420	chitinase$1 or chitotriosidase$1	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:13
L2	39	1 near4 human	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:13

PGPUB-DOCUMENT-NUMBER: 20040078842

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040078842 A1

TITLE: Chitinases, derived from carnivorous plants polynucleotide sequences encoding thereof, and methods of isolating and using same

PUBLICATION-DATE: April 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Zilberstein, Aviah	Holon	IL		
Eilenberg, Haviva	Ramat Hasharon	IL		
Schuster, Silvia	Raanana	IL		

APPL-NO: 10/ 451794

DATE FILED: November 24, 2003

PCT-DATA:
APPL-NO: PCT/IL02/00044
DATE-FILED: Jan 17, 2002
PUB-NO:
PUB-DATE:
371-DATE:
102(E)-DATE:

US-CL-CURRENT: 800/279, 424/94.61 , 435/200

ABSTRACT:

The present invention provides an enzymatic composition comprising at least one protein isolated from a tissue or soup of a carnivorous plant, the at least one protein being characterized with an endo-chitinase activity.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (15):
[0014] Prior art describes various applications of the enzymatic digestion of chitin by chitinases in the treatment and prevention of plant and animal disease. For example, Jaynes, et al disclosed the use of non-plant antimicrobial proteins to confer disease resistance in transgenic animals (U.S. Pat. No. 6,303,568), among them, chitinase. A novel chitinase from B. thuringensis was also reported by Moar (U.S. Pat. No. 6,280,722). However, no mention of chitinases from carnivorous plants has been made. Furthermore, the application of plant chitinases for human pathogens has not been reported.

Brief Description of Drawings Paragraph - DRTX (13):
[0078] FIGS. 10a-c are growth inhibition assay plates illustrating the fungicidal activity of chitin-induced Nepenthes trap soup chitinase on plant and human pathogens. In FIG. 10a the minimal inhibitory concentration (MIC) value for inhibition of the human pathogen Candida albicans was determined in

broth as detailed in the Methods section. Further assessment of yeast mortality (minimal fungicidal concentration, MFC) was carried out by re-plating 100 ml of the trap soup-exposed cells on trap soup-free solid medium (Sabuaruad) and counting the number of colonies following 48 hrs of incubation at 28.degree. C. Note the near-total absence of C. albicans colonies with exposure to 1:4 dilution (left plate) compared to 1:8 dilution (right plate) of trap soup. FIG. 10b illustrates the fungicidal activity of chitin-induced Nepenthes trap soup chitinase on the plant pathogen Septoria tritici. Liquid cultures of Septoria tritici conidia (2.5.times.10.sup.4 conidia/ml, 100 .mu.l) were incubated for six days at 19.degree. C. with 100 .mu.l of increasing dilutions (1-[fraction (1/32)]) of Nepenthes chitin-induced trap soup (total protein concentration in the undiluted sample=3.1 mg/ml). Minimal inhibitory dilution was 1:2, determined spectrophotometrically according to OD.sub.550. Samples (50 .mu.l) were plated on trap soup-free malt agar plates and incubated at the same conditions for an additional 6 days. The dilutions are indicated beside each sample (1, 1/2, [fraction (1/16)], [fraction (1/32)]). Control cultures were incubated without trap soup (H.sub.2O). Note that no S. tritici conidia survived exposure to undiluted trap soup (1). FIG. 10c illustrates the fungicidal activity of chitin-induced Nepenthes trap soup chitinase on Rhizoctonia solani and Aspergillium spp. mycelium development. Samples (20 .mu.l) of 5 fold concentrated trap soup were applied to plates containing log phase culture of either Rhizoctonia or Aspergillus. Note the inhibition area formed near the site of trap soup chitinase application (arrow).

Detail Description Paragraph - DETX (219):

[0293] Chitin-induced novel Nepenthes trap soup chitinase inhibits in vitro growth of the human pathogen Candida albicans: In order to determine the antifungal effects of novel Nepenthes trap soup chitinase on the important human pathogen C. albicans, sterile Nepenthes kassiana trap soup from normal and chitin-induced traps was collected and concentrated. For comparison, leaf extracts of three other carnivorous plants (Dionea, Drosera and Sarracenia) were prepared in the presence of protease inhibitors. Antifungal lethal/inhibitory activity of samples of the different extracts were evaluated in vitro using a Candida albicans growth assay, as detailed in Methods. The results, expressed as minimal inhibitory concentration (MIC) of each sample, are presented in Table V.

PGPUB-DOCUMENT-NUMBER: 20040058347

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040058347 A1

TITLE: Novel proteins and nucleic acids encoding same

PUBLICATION-DATE: March 25, 2004

INVENTOR-INFORMATION:

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Spytek, Kimberly A.	Ellington	CT	US	
Stone, David J.	Guilford	CT	US	
Voss, Edward Z.	Wallingford	CT	US	
Zhong, Mei	Branford	CT	US	

APPL-NO: 10/ 382248

DATE FILED: March 5, 2003

RELATED-US-APPL-DATA:

child 10382248 A1 20030305

parent continuation-in-part-of 10051874 20020116 US PENDING

non-provisional-of-provisional 60366928 20020322 US

non-provisional-of-provisional 60361974 20020306 US

non-provisional-of-provisional 60365477 20020319 US

non-provisional-of-provisional 60401661 20020806 US

US-CL-CURRENT: 435/6, 435/183 , 435/320.1 , 435/325 , 435/69.1 , 435/7.1 , 514/12 , 530/350 , 536/23.5

ABSTRACT:

The present invention provides novel isolated polynucleotides and small molecule target polypeptides encoded by the polynucleotides. Antibodies that

immunospecifically bind to a novel small molecule target polypeptide or any derivative, variant, mutant or fragment of that polypeptide, polynucleotide or antibody are disclosed, as are methods in which the small molecule target polypeptide, polynucleotide and antibody are utilized in the detection and treatment of a broad range of pathological states. More specifically, the present invention discloses methods of using recombinantly expressed and/or endogenously expressed proteins in various screening procedures for the purpose of identifying therapeutic antibodies and therapeutic small molecules associated with diseases. The invention further discloses therapeutic, diagnostic and research methods for diagnosis, treatment, and prevention of disorders involving any one of these novel human nucleic acids and proteins.

RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. Ser. No. 10/051,874, filed Jan. 16, 2002, and claims priority to provisional patent applications U.S. Ser. No. 60/366,928, filed Mar. 22, 2002; U.S. Ser. No. 60/361,974, filed Mar. 6, 2002; U.S. Ser. No. 60/365,477, filed Mar. 19, 2002; and U.S. Ser. No. 60/401,661, filed Aug. 6, 2002, each of which is incorporated herein by reference in its entirety.

---------- KWIC ---------

Detail Description Table CWU - DETL (51):
50TABLE 9D Geneseq Results for NOV9a NOV9a Identities/ Protein/ Residues/ Similarities for Geneseq Organism/Length Match the Matched Expect Identifier [Patent #, Date] Residues Region Value ABB76291 Human chitinase - 1 . . . 459 459/466 (98%) 0.0 Homo sapiens, 466 1 . . . 466 459/466 (98%) aa. [U.S. Pat. No. 6372212-B1, Apr. 16, 2002] AAE25903 Human chitinase 1 . . . 459 459/466 (98%) 0.0 allelic variant 1 . . . 466 459/466 (98%) clone, MO-218 protein - Homo sapiens, 466 aa. [U.S. Pat. No. 6399571-B1, Jun. 4, 2002] AAE00432 Human chitinase 1 . . . 459 459/466 (98%) 0.0 protein from clone 1 . . . 466 459/466 (98%) pMO-218 - Homo sapiens, 466 aa. [WO200123430-A2, Apr. 5, 2001] AAY42425 MO-218 clone of 1 . . . 459 459/466 (98%) 0.0 human Chitinase, 1 . . . 466 459/466 (98%) amino acid sequence - Homo sapiens, 466 aa. [WO9946390-A1, Sep. 16, 1999] AAW40259 Human chitinase 1 . . . 459 459/466 (98%) 0.0 protein from clone 1 . . . 466 459/466 (98%) MO-218 - Homo sapiens, 466 aa. [WO9747752-A1, Dec. 18, 1997]

PGPUB-DOCUMENT-NUMBER: 20040038207

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040038207 A1

TITLE: Gene expression in bladder tumors

PUBLICATION-DATE: February 26, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Orntoft, Torben F.	Aabyhoj		DK	

APPL-NO: 09/ 951968

DATE FILED: September 14, 2001

RELATED-US-APPL-DATA:

child 09951968 A1 20010914

parent division-of 09510643 20000222 US UNKNOWN

US-CL-CURRENT: 435/6

ABSTRACT:

Methods for analyzing tumor cells, particularly bladder tumor cells employ gene expression analysis of samples. Gene expression patterns are formed and compared to reference patterns. Alternatively gene expression patterns are manipulated to exclude genes which are expressed in contaminating cell populations. Another alternative employs subtraction of the expression of genes which are expressed in contaminating cell types. These methods provide improved accuracy as well as alternative basis for analysis from diagnostic and prognostic tools currently available.

[0001] This application claims the benefit of U.S. Provisional Application No. 60/121,124, filed Feb. 22, 1999, which is hereby incorporated by reference in its entirety.

---------- KWIC ---------

Detail Description Table CWU - DETL (82):
167 phosphatase (ACP1) "gene," 5' flanking region and U25956_at Human P-selectin glycoprotein ligand (SELPLG) gene 20 20 20 20 20 20 U25975_at Human serine kinase (hPAK65) "mRNA," 31 54 110 94 276 107 partial cds U25988_at Human pregnancy-specific glycoprotein 13 (PSG13) 158 26 78 97 20 89 "mRNA," complete cds U25997_at Human stanniocalcin precursor (STC) "mRNA," 20 20 20 20 20 20 complete cds U26032_at Human translation initiation factor eIF-2alpha 70 20 25 44 20 71 "mRNA," 3'UTR U26173_s_at Human bZIP protein NF-IL3A (IL3BP1) "mRNA," 114 55 29 47 131 52 complete cds U26174_at Human pre-granzyme 3 "mRNA," 38 22 106 26 20 80 complete cds U26266_s_at Human deoxyhypusine synthase "mRNA," 20 20 20 20 20 20 complete cds /gb = U26266 /ntype = RNA U26312_s_at Human heterochromatin protein HP1Hs-gamma 20 23 105

104 28 52 "mRNA," complete cds U26398_at Human inositol polyphosphate 4-phosphatase 62 88 20 25 20 123 "mRNA," complete cds U26403_at Human receptor tyrosine kinase ligand LERK-7 67 34 80 55 131 59 precursor (EPLG7) "mRNA," complete cds U26424_at Human Ste20-like kinase (MST2) "mRNA,' 23 84 40 51 20 40 complete cds U26591_at Human clone IS10 diabetes mellitus type I 27 82 20 30 20 49 autoantigen (ICAp69) "mRNA," complete cds U26648_at Human syntaxin 5 "mRNA," complete cds 170 188 74 77 112 67 U26710_at Human cbl-b "mRNA," complete cds 20 20 94 26 141 20 U26202_at Human cbl-b truncated form 2 lacking leucine 20 20 59 22 20 45 zipper "mRNA," complete cds U26726_at Human 11-beta-hydroxysteroid dehydrogenase type 20 20 20 20 20 20 2 "mRNA," complete cds U26767_at Human p16INK4/MTS1 "mRNA," 20 20 20 20 20 602 complete cds U26914_at Human ras-responsive element binding protein 28 20 26 28 91 20 (RREB-1) "mRNA," complete cds U27109_at Human prepromultimerin "mRNA," 20 43 20 20 96 33 complete cds U27185_at Human RAR-reaponsive (TIG1) "mRNA," 27 152 27 27 256 20 complete cds U27193_at Human protein-tyrosine phosphataae "mRNA," 20 20 20 20 45 86 complete cds U27325_s_at Human thromboxane A2 receptor "mRNA," 20 47 138 200 399 165 complete cds U27326_s_at Human alpha "(1,3/1,4)" fucosyltransferase 53 20 20 20 52 20 (FUT3) "mRNA," major transcript "I," complete cds U27330_at Human alpha "(1,3)" fucosyltransferaae 75 20 20 27 26 20 (FUT5) "mRNA," minor transcript "II," complete cds U27333_at 20 20 20 20 36 179 U27333_s_at Human alpha "(1,3)" fucosyltransferase 97 20 27 35 29 36 (FUT6) "mRNA," major transcript "I," complete cds U27459_at Human origin recognition complex protein 2 homolog 20 20 40 38 20 56 hORC2L "mRNA," complete cds U27460_at Human uridine diphosphoglucose pyrophosphorylase 111 106 146 131 20 114 "mRNA," complete cds U27516_s_at Human recombination protein RAD52 "mRNA," 20 20 20 20 20 20 complete cds U27655_at Human RGP3 "mRNA," complete cds 61 123 20 39 536 393 U27699_at Human pephBGT-1 betaine-GABA transporter 20 20 20 20 61 128 "mRNA," complete cds U27768_at Human RGP4 "mRNA," complete cds 66 156 90 153 20 109 U27831_at Human striatum-enriched phosphatase (STEP) 47 208 151 135 368 371 "mRNA," partial cds U28014_at Human cysteine protease (ICErel-II) "mRNA," 94 168 109 105 20 63 complete cds U28015_at Human cysteine protease (ICErel-III) "mRNA," 20 20 82 20 75 20 complete cds U28042_at Human DEAD box RNA helicase-like protein "mRNA," 20 20 20 20 216 33 complete cds U28043_at Human plasma membrane Na+/H+ exchanger isoform 20 47 20 23 41 141 3 (NHE3) "mRNA," complete cds U26049_at Human TBX2 (TXB2) "mRNA,' complete cds 20 39 115 163 90 93 U28055_at Human hepatocyte growth factor-like protein homolog 20 20 20 20 20 20 (D1F15S1A) "mRNA," partial cds U28131_at Human HMGI-C chimeric transcript mRNA, partial cds 35 114 29 55 170 57 U28150_at Human adrenoleukodystrophy related protein (hALDR) 20 20 20 20 20 26 "gene," partial cds /gb = U28150 /ntype = DNA /annot = CDS U28249_at Human 11kd protein "mRNA," complete cds 20 115 108 165 20 97 U28251_cds2_at Human Krueppel-type zinc finger protein (ZNF169) gene, 20 20 20 20 20 20 final exon, partial cds U28281_at Human secretin receptor "mRNA," 49 121 40 20 45 162 complete cds U28368_at Human Id-related helix-loop-helix protein Id4 20 35 45 20 20 20 "mRNA," complete cds U28369_at Human semaphorin V "mRNA," 22 54 20 60 20 20 complete cds U28386_at Human nuclear localization sequence receptor 89 69 25 138 186 136 hSRP1alpha "mRNA," complete cds U28413_at Human Cockayne syndrome complementation group 20 62 20 20 20 92 A CSA protein (CSA) "mRNA," complete cds U28488_s_at Human putative G protein-coupled receptor (AZ38) 20 20 20 20 20 32 "mRNA," complete cds U28686_at Human putative RNA binding protein RNPL "mRNA," 85 63 192 103 119 116 complete cds U28687_at Human zinc finger containing protein ZNF157 (ZNF157) 20 89 114 48 20 20 "mRNA," complete cds U28727_at Human pregnancy-associated plasma protein-A preproform 20 20 20 20 20 20 (PAPPA) "mRNA," complete cds U28749_s_at Human high-mobility group phosphoprotein isoform I-C 20 20 20 20 62 38 (HMGIC) "mRNA," complete cds U28758_s_at Human NMDA receptor subtype 2B subunit (GRIN2B) 20 20 20 20 20 20 "mRNA," partial cds U28811_at Human cysteine-rich fibroblast growth factor receptor 33 54 36 25 127 20 (CFR-1)

"mRNA," complete cds U28831_at Human protein immuno-reactive with anti-PTH polyclonal 20 20 20 20 20 20 antibodies "mRNA," partial cds U28833_at Human Down syndrome critical region protein (DSCR1) 20 20 44 23 32 20 "mRNA," complete cds U28963_at Human Gps2 (GPS2) "mRNA," complete cds 69 81 20 87 111 183 U29091_at Human selenium-binding protein (hSBP) "mRNA," 55 63 20 20 105 233 complete cds. /gb = U29091 /ntype = RNA U29171_at Human casein kinase I delta "mRNA," 104 137 20 190 27 317 complete cds U29175_at 53 63 153 200 20 87 U29195_at Human neuronal pentraxin II (NPTX2) gene 20 20 20 20 20 57 U29343_at Human hyaluronan receptor (RHAMM) "mRNA," 20 109 20 20 128 44 complete cds U29463_s_at Human cytochrome b561 gene 52 38 36 80 166 62 U29589_at Human m3 muscarinic acetylcholine receptor (CHRM3) 44 41 20 26 127 20 "gene," complete cds U29607_at Human methionine aminopeptidase "mRNA," 41 276 227 240 20 241 complete cds U29615_at Human chitotriosidase precursor "mRNA," 33 101 20 20 176 20 complete cds U29656_at Human DR-nm23 "mRNA," complete cds 158 412 387 174 325 251 U29680_at Human A1 protein "mRNA," complete cds 43 139 20 44 112 20 U29700_at Human anti-mullerian hormone type II receptor precursor 110 178 110 176 113 26 "gene," complete cds U29725_at Human BMK1 alpha kinase "mRNA," 69 20 20 66 20 25 complete cds U29943_s_at Human ELAV-like neuronal protein-2 20 20 20 20 34 20 Hel-N2 "mRNA," complete cds U29953_ma1_at Human pigment epithelium-derived factor gene, 349 185 20 42 231 388 omplete cds U30185_at Human orphan opioid receptor "mRNA," 20 99 20 20 20 20 complete cds U30245_at Human myelomonocytlc specific protein (MNDA) 20 20 20 20 26 40 "gene," 5' flanking sequence and complete exon 1 /gb = U30245 /ntype = DNA /annot = exon U30246_at Human bumetanide-sensitive Na-K-Cl 20 77 49 42 50 20 cotransporter (NKCC1) "mRNA," complete cds U30255_at Human phosphogluconate dehydrogenase 503 115 20 119 20 209 (hPGDH) "gene," complete cds U30313_at Human diadenosine tetraphosphatase "mRNA," 20 20 20 20 20 20 complete cds. /gb = U30313 /ntype = RNA U30521_at Human P311 HUM -3.1 "mRNA," 23 70 20 20 60 20 complete cds U30610_at Human CD94 protein "mRNA," 20 135 20 20 20 55 complete cds U30825_at Human splicing factor SRp30c "mRNA," 206 355 918 439 206 137 complete cds U30827_s_at Human splicing factor SRp40-3 (SRp40) "mRNA," 79 82 369 216 20 96 complete cds U30828_at Human splicing factor SRp55-2 (SRp55) "mRNA," 37 37 93 20 112 151 complete cds

PGPUB-DOCUMENT-NUMBER: 20030219741

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030219741 A1

TITLE: Novel full-length cDNA

PUBLICATION-DATE: November 27, 2003

INVENTOR-INFORMATION:

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APPL-NO: 10/ 094749

DATE FILED: March 12, 2002

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60350435 20020124 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
JP	2001-328381	2001JP-2001-328381	September 14, 2001

US-CL-CURRENT: 435/6, 435/183 , 435/320.1 , 435/325 , 435/69.1 , 530/350 , 530/388.26 , 536/23.2

ABSTRACT:

Novel full-length cDNAs are provided.
1639 cDNA derived from human have been isolated. The full-length nucleotide sequences of the cDNA and amino acid sequences encoded by the nucleotide sequences have been determined. Because the cDNA of the present invention are full-length and contain the translation start site, they provide information useful for analyzing the functions of the polypeptide.

---------- KWIC ---------

Detail Description Paragraph - DETX (1732):
[1760] CD34C20000510//Human chitotriosidase precursor mRNA, complete cds.//7.80E-247//366aa//98%//U29615

PGPUB-DOCUMENT-NUMBER: 20030215847

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030215847 A1

TITLE: Human cartilage glycoprotein

PUBLICATION-DATE: November 20, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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Rosenberg, Martin	Royersford	PA	US	

APPL-NO: 10/ 373802

DATE FILED: February 27, 2003

RELATED-US-APPL-DATA:

child 10373802 A1 20030227

parent division-of 08850348 19970502 US GRANTED

parent-patent 6576427 US

non-provisional-of-provisional 60016532 19960503 US

US-CL-CURRENT: 435/6, 435/226 , 435/320.1 , 435/325 , 435/69.1 , 435/7.93 , 435/91.2 , 530/350 , 536/23.5

ABSTRACT:

Nucleic acid sequences for HC gp-39L are provided. Methods of detecting altered expression of tissue remodeling proteins and diagnosing tissue remodeling disorders are also provided.

RELATED APPLICATIONS

[0001] This application is a divisional of and claims priority under 35 U.S.C. .sctn.120 to U.S. application Ser. No. 08/850,348, filed May 2, 1997, which claims the benefit of U.S. Provisional Application No. 60/016,532, filed May 3, 1996 all of which are incorporated herein in their entirety.

---------- KWIC ---------

Detail Description Paragraph - DETX (40):

[0054] It is now believed that the chitinase-like proteins, particularly HC gp-39L are involved in issue remodeling. HC gp-39, HC gp-39L and human chitotriosidase are all homologous to microbial chitinases. In particular all three proteins share a similar cysteine motif and homology to the active site of microbial chitinases. Accordingly, these proteins can be used in the development of treatments for tissue remodeling diseases and in the diagnosis of these diseases.

PGPUB-DOCUMENT-NUMBER: 20030203375

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030203375 A1

TITLE: Novel acidic mammalian proteins and polynucleotides encoding the same

PUBLICATION-DATE: October 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kelly, Karen M.	Branford	CT	US	
Lewin, David A.	New Haven	CT	US	
Stewart, Timothy A.	San Francisco	CA	US	

APPL-NO: 10/ 268919

DATE FILED: October 9, 2002

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60327902 20011009 US

US-CL-CURRENT: 435/6, 435/320.1 , 435/325 , 435/69.1 , 435/7.2 , 530/350 , 536/23.5

ABSTRACT:

Genes are disclosed that are differentially-regulated during feeding and fasting cycles. These genes, and their encoded polypeptides are useful to combat obesity and other metabolic disorders.

RELATED APPLICATIONS

[0001] This application claims priority to U.S. provisional application Serial No. 60/327,902 filed Oct. 9, 2001, which is incorporated herein by reference in its entirety.

---------- KWIC ---------

Detail Description Paragraph - DETX (6):

[0025] Next to cellulose, chitin is the most abundant glycopolymer on earth, being present as a structural component in cell walls of most fungi, the microfilarial sheath of parasitic nematodes and the exoskeleton of all types of arthropods, as well as in the lining of the guts of many insects. Recently, the first human chitinases, chitotriosdiase and acidic mammalian chitinase, have been isolated and cloned (Boot et al., 2001, Boot et al., 1995, Renkema et al., 1995). The relevance of chitinases to human physiology is yet to be understood.

Detail Description Paragraph - DETX (8):

[0027] Individuals that are homozygous null for chitotriosidase exist in about 6% of the population (Giraldo et al., 2001), although no gross abnormalities are observed. The role or chitotriosidase in human physiology is unknown, although suggestions that it may be expressed to combat

chitin-containing pathogens as well as in morphogenetic events has been made (Boot et al., 1995). That only 6% of the population is null for this gene, and not the prediction of 25% based on Mendelian single gene inheritance patterns leads to the speculation that chitotriosidase plays an important role.

Detail Description Paragraph - DETX (37):
[0056] Comparison of mouse contig and human AMCase precursor by BLASTX is shown in Table 9. The query sequence was the mouse contig cgmm10e1167.4.sub.--37627-215EXT (SEQ ID NO:2), and the subject sequence was >ptnr:SPTREMBL-ACC:Q9BZP6 ACIDIC MAMMALIAN CHITINASE PRECURSOR (EC3.2.1.14)-(Human), GenBank ACC:AAG60019; SEQ ID NO:5; Table 8: plus strand HSPs).

Detail Description Paragraph - DETX (40):
[0059] CLUSTALW software, useful in viewing the specific details of where related sequences align, mismatch, or have gap, was used to determine nearest neighbors (Thompson et al., 1994). The following sequences were compared for homology using the CLUSTALW software (Table 14) the human eosinophil chemotactic-like cytokine (SEQ ID NO:6), Table 10; NM.sub.--021797 (of which the polypeptide sequence is provided in Table 10a; SEQ ID NO:7)), human mammalian acid chitinase precursor (SEQ ID NO:8; Table 11; AF290004.1), novel acidic mammalian molecule/LOE1167.4/1.3610e1167.4.sub.--367EXT (SEQ ID NO:1; Table 2), mammalian chitinase precursor/1.36 Gbaf290003Mmchitinaseprecu) (SEQ ID NO:9; Table 12; AAG60019), and mammalian chemokine/1.36 GBbc011134Mmchemokine (SEQ ID NO:10; Table 13; BC011134). Highly conserved regions (black) suggest those regions of the polypeptide that are most important for function. The sequence type was explicitly set to DNA and the sequence format is Pearson.

Detail Description Paragraph - DETX (46):
[0065] CLUSTALW software was also used to determine nearest neighbors of the novel acidic mammalian molecule protein sequence, as well as to determine where the sequences align, mismatch or have gaps. In this analysis (Table 15) the following sequences were compared: mouse AMCase (1.36Q99PH2) (SEQ ID NO:11), mouse eosinophil chemotactic-like cytokine (1.36AAH11134) (SEQ ID NO:4), novel human chitinase (1.36Q9ULY4) (SEQ ID NO:13), human AMCase precursor (1.36Q9BZP6) (SEQ ID:5), and novel acidic mammalian molecule protein sequence (1.3610e1167.4cgmm10e1167.4.sub.--376- 27.sub.--215_EXT) (SEQ ID NO:2). Highly conserved regions (black) suggest those regions of the polypeptide that are most important for function. The sequence type was set specifically to protein and the sequence format was Pearson.

Detail Description Paragraph - DETX (514):
[0500] Boot, R. G., Renkema, G. H., Strijland, A., van Zonneveld, A. J. and Aerts, J. M. (1995) Cloning of a cDNA encoding chitotriosidase, a human chitinase produced by macrophages. J Biol Chem 270, 26252-26256.

Detail Description Paragraph - DETX (707):
[0693] Renkema, G. H., Boot, R. G., Muijsers, A. O., Donker-Koopman, W. E. and Aerts, J. M. (1995) Purification and characterization of human chitotriosidase, a novel member of the chitinase family of proteins. J Biol Chem 270, 2198-2202.

Detail Description Table CWU - DETL (11):
12TABLE 11 Human mammalian acid chitinase precursor (SEQ ID NO:8)
gctttccagt ctggtggtga atcctccata gtctgaagcc tttgtgataa ccacagaatc 60
agaacatata aaaagctctg cgggactggt gctgactgca accatgacaa agcttattct 120
cctcacaggt cttgtcctta tactgaattt gcagctcggc tctgcctacc agctgacatg 180
ctacttcacc aactgggccc agtaccggcc aggcctgggg cgcttcatgc ctgacaacat 240

cgacccctgc ctctgtaccc acctgatcta cgcctttgct gggaggcaga acaacgagat 300
caccaccatc gaatggaacg atgtgactct ctaccaagct ttcaatggcc tgaaaaataa 360
gaacagccag ctgaaaactc tcctggccat tggaggctgg aacttcggga ctgccccttt 420
cactgccatg gtttctactc ctgagaaccg ccagactttc atcacctcag tcatcaaatt 480
cctgcgccag tatgagtttg acgggctgga ctttgactgg gagtaccctg gctctcgtgg 540
gagccctcct caggacaagc atctcttcac tgtcctggtg caggaaatgc gtgaagcttt 600
tgagcaggag gccaagcaga tcaacaagcc caggctgatg gtcactgctg cagtagctgc 660
tggcatctcc aatatccagt ctggctatga gatcccccaa ctgtcacagt acctggacta 720
catccatgtc atgacctacg acctccatgg ctcctgggag ggctacactg gagagaacag 780
ccccctctac aaatacccga ctgacaccgg cagcaacgcc tacctcaatg tggattatgt 840
catgaactac tggaaggaca atggagcacc agctgagaag ctcatcgttg gattccctac 900
ctatggacac aacttcatcc tgagcaaccc ctccaacact ggaattggtg cccccacctc 960
tggtgctggt cctgctgggc cctatgccaa ggagtctggg atctgggctt actacgagat 1020
ctgtaccttc ctgaaaaatg gagccactca gggatgggat gcccctcagg aagtgcctta 1080
tgcctatcag ggcaatgtgt gggttggcta tgacaacatc aagagcttcg atattaaggc 1140
tcaatggctt aagcacaaca aatttggagg cgccatggtc tgggccattg atctggatga 1200
cttcactggc actttctgca accagggcaa gtttccccta atctccaccc tgaagaaggc 1260
cctcggcctg cagagtgcaa gttgcacggc tccagctcag cccattgagc caataactgc 1320
tgctcccagt ggcagcggga acgggagcgg gagtagcagc tctggaggca gctcgggagg 1380
cagtggattc tgtgctgtca gagccaacgg cctctacccc gtggcaaata acagaaatgc 1440
cttctggcac tgcgtgaatg gagtcacgta ccagcagaac tgccaggccg ggcttgtctt 1500
cgacaccagc tgtgattgct gcaactgggc ataaacctga cctggtctat attccctaga 1560
gttccagtct cttttgctta ggacatgttg cccctaccta aagtcctgca ataaaatcag 1620 cagtc
1625

US-PAT-NO: 6714925

DOCUMENT-IDENTIFIER: US 6714925 B1

TITLE: System for identifying patterns in biological data using a distributed network

DATE-ISSUED: March 30, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barnhill; Stephen	Savannah	GA	N/A	N/A
Guyon; Isabelle	Berkeley	CA	N/A	N/A
Weston; Jason	New York	NY	N/A	N/A

APPL-NO: 09/ 633627

DATE FILED: August 7, 2000

PARENT-CASE:

RELATED APPLICATIONS

This application is a continuation-in-part of U.S. patent application Ser. Nos. 09/303,386; 09/303,387; 09/303,389; 09/305.345; all filed May 1, 1999; and U.S. patent application Ser. No. 09/568,301, filed May 9, 2000; and U.S. patent application Ser. No. 09/578,011, filed May 24, 2000 and also claims the benefit of U.S. Provisional Patent Application No. 60/161,806, filed Oct. 27, 1999; of U.S. Provisional Patent Application No. 60/168,703, filed Dec. 2, 1999; of U.S. Provisional Patent Application No. 60/184,596, filed Feb. 24, 2000; and of U.S. Provisional Patent Application Serial No. 60/191,219, filed Mar. 22, 2000.

US-CL-CURRENT: 706/48, 706/16

ABSTRACT:

System for enhancing knowledge discovery from data using a learning machine in general and a support vector machine in particular in a distributed network environment. A customer transmits training data, test data and live data to a vendor's server from a remote source, via a distributed network. The training biological data, test biological data and live biological data is stored in a storage device. Training biological data is then pre-processed in order to add meaning thereto. Pre-processing data involves transforming the biological data points and/or expanding the biological data points. Live biological data is pre-processed and input into the trained and tested learning machine. The live output from the learning machine is then post-processed into a computationally derived alphanumerical classifier for interpretation by a human or computer automated process.

16 Claims, 54 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 33

---------- KWIC ---------

Detailed Description Text - DETX (194):
In the case of human chitotriosidase, one needs to proceed by analogy with another homologous protein of the same family whose role in another cancer is under study: another chitinase (BRP39) was found to play a role in breast cancer. Cancer cells overproduce this chitinase to survive apoptosis (Aronson, 1999). Important increased chitotriosidase activity has been noticed in clinical studies of Gauchers disease patients, an apparently unrelated condition. To diagnose that other disease the chitotriosidase enzyme can be very sensitively measured. The plasma or serum prepared from less than a droplet of blood is highly sufficient for the chitotriosidase measurement (Aerts, 1996). This opens the door to a possible new diagnosis test for colon cancer as well.

Detailed Description Paragraph Table - DETL (5):
TABLE 2 QT_clust clusters selected with RFE. Min Rk correl GAN Description 1 0.82 X54163 TROPONIN I, CARDIAC MUSCLE (HUMAN); contains element MER22 repetitive element D23672 Human mRNA for biotin-[propionyl-CoA-carboxylase(ATP-hydrolysing)]ligase, complete cds. Y00970 2 0.82 T51023 75127 HEAT SHOCK PROTEIN HSP 90- BETA (HUMAN). T69446 82983 EUKARYOTIC INITIATION FACTOR 4A-I (HUMAN);. R37428 26100 Human unknown protein mRNA, partial cds. H89087 253224 SPLICING FACTOR SC35 (Homo sapiens) R96357 197929 POLYADENYLATE-BINDING PROTEIN (Xenopus laevis) T96873 121343 HYPOTHETICAL PROTEIN IN TRPE 3REGION (Spirochaeta aurantia) H72234 213492 DNA-(APURINIC OR APYRIMIDINIC SITE) LYASE (HUMAN);. 3 0.83 T85247 111192 CYTOCHROME C OXIDASE POLYPEPTIDE VIC PRECURSOR (HUMAN);. R08021 127104 INORGANIC PYROPHOSPHATASE (Bos taurus) M22760 Homo sapiens nuclear-encoded mitochondrial cytochrome c oxidase Va subunit mRNA, complete cds. 4 0.84 T94579 119384 Human chitotriosidase precursor mRNA, complete cds. T83361 116665 GAMMA INTERFERON INDUCED MONOKINE PRECURSOR (Homo sapiens) R89377 196061 NEDD5 PROTEIN (Mus musculus) 5 0.85 R51749 39237 TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP4 (Equine herpesvirus type 1) R10620 128901 TYROSINE-PROTEIN KINASE CSK (Homo sapiens) H29483 49967 INTERCELLULAR ADHESION MOLECULE-2 PRECURSOR (HUMAN);. 6 0.82 X55187 Human mRNA for alpha-actinin, partial cds. X74295 H.sapiens mRNA for alpha 7B integrin. R48303 153505 TYROSINE RICH ACIDIC MATRIX PROTEIN (Bos taurus) X86693 H.sapiens mRNA for hevin like protein. H06524 44386 GELSOLIN PRECURSOR, PLASMA (HUMAN);. 7 0.87 H61410 211590 PLATELET GLYCOPROTEIN IV (Homo sapiens) H67764 229939 ESTROGEN SULFOTRANSFERASE (Bos taurus) U06698 Human neuronal kinesin heavy chain mRNA, complete cds. R39209 23464 HUMAN IMMUNODEFICIENCY VIRUS TYPE I ENHANCER-BINDING PROTEIN 2 (Homo sapiens) R39209 23464 HUMAN IMMUNODEFICIENCY VIRUS TYPE I ENHANCER-BINDING PROTEIN 2 (Homo sapiens) 8 0.82 R10066 128808 PROHIBITIN (Homo sapiens) U09564 Human serine kinase mRNA, complete cds. R62549 138906 PUTATIVE SERINE/THREONINE-PROTEIN KINASE B0464.5 IN CHROMOSOME III (Caenorhabditis elegans) The higher the cluster rank (Rk), the more important the cluster. Min correl is the minimum correlation coefficient between cluster elements. GAN = Gene Accession Number.

Detailed Description Paragraph Table - DETL (7):
TABLE 4 The 7 top ranked genes discovered by the methods of the present invention, in order of increasing importance. Possible function/relation to Rk Sgn GAN Description colon cancer 1 - H08393 COLLAGEN Collagen is involved in cell ALPHA 2(XI) adhesion. Colon carcinoma CHAIN (Homo cells have collagen de- sapiens) grading activity as part of the metastatic process. 2 - M59040 Human cell adhesion CD44 is upregulated when molecule (CD44) colon adenocarcinoma mRNA, complete tumor cells transit to the cds. metastatic state. 3 - T94579 Human Another chitinase (BRP39) chitotriosidase was found to play a role in precursor mRNA, breast cancer. Cancer cells complete cds.

overproduce this chitinase to survive apoptosis. 4 + H81558 PROCYCLIC It was shown that patients FORM SPECIFIC infected by Trypanosoma (a POLYPEPTIDE B1 - colon parasite) develop ALPHA resistance against colon PRECURSOR cancer. (Trypanosoma brucei brucei) 5 + R88740 ATP SYNTHASE ATP synthase is an enzyme COUPLING that helps build blood FACTOR 6, vessels that feed the MITOCHONDRIAL tumors. PRECURSOR (HUMAN) 6 - T62947 60S RIBOSOMAL May play a role in control- PROTEIN L24 ling cell growth and pro- (Arabidopsis liferation through the selec- thaliana) tive translation of particular classes of mRNA. 7 + H64807 PLACENTAL Diminished status of folate FOLATE has been associated with TRANSPORTER enhanced risk of colon (Homo sapiens) cancer. Rk rank. Sgn sign of correlation with the target separation, - for over-expressed in most cancer tissues; + for over-expressed in most normal tissues; GAN: Gene Accession Number; The possible function is derived from a keyword search involving "colon cancer" or "cancer" and some words in the gene description.

Detailed Description Paragraph Table - DETL (9):

TABLE 6 SVM top ranked clusters when using all 62 tissues. Min Rk correl Sgn GAN Description 1 0.75 - * H08393 COLLAGEN ALPHA 2(X1) CHAIN (Homo sapiens) - T48804 40S RIBOSOMAL PROTEIN S24 (HUMAN). - T51529 ELONGATION FACTOR 1-DELTA (Artemia salina) 2 0.61 - * M59040 Human cell adhesion molecule (CD44) mRNA, complete cds. - H04802 DIHYDROPRYRIDINE-SENSITIVE L-TYPE, SKELETAL MUSCLE CALCIUM CHANNEL GAMMA SUBUNIT (Homo sapiens) - T65740 SINGLE-STRANDED DNA BINDING PROTEIN P9 PRECURSOR (Mus musculus) - L39874 Homo sapiens deoxycytidylate deaminase gene, complete cds. - R44740 DUAL SPECIFICITY MITOGEN- ACTIVATED PROTEIN KINASE KINASE 1 (Xenopus laevis) 3 0.54 - * T94579 Human chitotriosidase precursor mRNA, complete cds. - T63539 INHIBIN BETA A CHAIN PRECURSOR (Mus musculus) - T54360 GRANULINS PRECURSOR (HUMAN). + X17273 Human HLA G (HLA 6.0) mRNA for non classical class I transplantation antigen. + T57882 MYOSIN HEAVY CHAIN, NON- MUSCLE TYPE A (Homo sapiens) - R89377 NEDD5 PROTEIN (Mus musculus) - M19283 Human cytoskeletal gamma-actin gene, complete cds. - T83361 GAMMA INTERFERON INDUCED MONOKINE PRECURSOR (Homo sapiens) - H66786 ESTROGEN SULFOTRANSFERASE (Bos taurus) - T51849 TYROSINE-PROTEIN KINASE RECEPTOR ELK PRECURSOR (Rattus norvegicus) - T86444 PROBABLE NUCLEAR ANTIGEN (Pseudorabies virus) 4 1 + * H81558 PROCYCLIC FORM SPECIFIC POLYPEPTIDE B1-ALPHA PRE- CURSOR (Trypanosoma brucei brucei) 5 0.81 + * R88740 ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);. + T54670 P13621 ATP SYNTHASE OLIGOMYCIN SENSITIVITY CONFERRAL PROTEIN PRECURSOR, MITOCHONDRIAL. 6 0.61 - * T62947 60S RIBOSOMAL PROTEIN L24 (Arabidopsis thaliana) - T61609 LAMININ RECEPTOR (HUMAN);. - T70062 Human nuclear factor NF45 mRNA, complete cds. - U14971 Human ribosomal protein S9 mRNA, complete cds. - T57619 40S RIBOSOMAL PROTEIN S6 (Nicotiana tabacum) - U30825 Human splicing factor SRp30c mRNA, complete cds. - L10284 Homo sapiens integral membrane protein, calnexin, (IP90) mRNA, complete cds. - D00763 PROTEASOME COMPONENT C9 (HUMAN);. - T58861 60S RIBOSOMAL PROTEIN L30E (Kluyveromyc lactis) 7 1 + * H64807 PLACENTAL FOLATE TRANSPORTER (Homo sapiens) Clusters are built around the best genes with threshold .theta. = 0.75. The higher the cluster rank (Rk), the more "relevant" the cluster should be. Min correl is the minimum correlation coefficient between cluster elements. Sgn sign of correlation with the target separation, - for over-expressed in most cancer tissues; + for over-expressed in most normal tissues; GAN Gene Accession Number. The cluster centers are preceded by a star. None of the genes seem to be tissue composition related. 54Y028Xs

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2420	chitinase$1 or chitotriosidase$1	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:13
L2	39	1 near4 human	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:13
L3	66	1 same (culture adj medi$4)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:18
L4	88	1 same (cosemetic$1 or dental or toothpaste$1 or food)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:19
L5	212	1 same antifung$	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:20
L6	18	5 same (human or mammal$)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:21

PGPUB-DOCUMENT-NUMBER: 20040078842

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040078842 A1

TITLE: Chitinases, derived from carnivorous plants polynucleotide sequences encoding thereof, and methods of isolating and using same

PUBLICATION-DATE: April 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Zilberstein, Aviah	Holon		IL	
Eilenberg, Haviva	Ramat Hasharon		IL	
Schuster, Silvia	Raanana		IL	

APPL-NO: 10/ 451794

DATE FILED: November 24, 2003

PCT-DATA:
APPL-NO: PCT/IL02/00044
DATE-FILED: Jan 17, 2002
PUB-NO:
PUB-DATE:
371-DATE:
102(E)-DATE:

US-CL-CURRENT: 800/279, 424/94.61 , 435/200

ABSTRACT:

The present invention provides an enzymatic composition comprising at least one protein isolated from a tissue or soup of a carnivorous plant, the at least one protein being characterized with an endo-chitinase activity.

---------- KWIC ---------

Detail Description Paragraph - DETX (219):
[0293] Chitin-induced novel Nepenthes trap soup chitinase inhibits in vitro growth of the human pathogen Candida albicans: In order to determine the antifungal effects of novel Nepenthes trap soup chitinase on the important human pathogen C. albicans, sterile Nepenthes kassiana trap soup from normal and chitin-induced traps was collected and concentrated. For comparison, leaf extracts of three other carnivorous plants (Dionea, Drosera and Sarracenia) were prepared in the presence of protease inhibitors. Antifungal lethal/inhibitory activity of samples of the different extracts were evaluated in vitro using a Candida albicans growth assay, as detailed in Methods. The results, expressed as minimal inhibitory concentration (MIC) of each sample, are presented in Table V.

Detail Description Paragraph - DETX (263):
[0317] The abovementioned Examples indicate that Nepenthes kassiana (Nepenthaceae) possesses a group of highly active, novel chitinases. Although

such high chitinase activity has not been demonstrated in other species, three additional genera (Dionea sp., Drosera sp., and Sarracenia sp.) of carnivorous plants belonging to two separate families (the first two belong to Droseraceae and the third to Sarraceniaceae) were screened. The three representatives were screened for antifungal properties as well as chitinase activity. These three carnivorous plants have developed individual structural mechanisms for trapping insect prey: whereas Nepenthes and Sarracenia use trap soup to digest the insects, the other plants have either sticky droplets that trap the prey or leaves that fold around the prey. Therefore, both the antifungal as well as the chitinase activity assays were performed with trap tissue extracts rather than trap soup. Table Ia (see Example 9, above) summarizes the results of the antifungal activity of the tissue extracts on the human pathogen Candida albicans. Both Dionea and Drosera extracts demonstrate very potent inhibition of Candida albicans growth, effective even at the lowest examined dilution (1/32). Sarracenia is also active in inhibiting the growth of Candida albicans, albeit at higher concentrations. Taken together these results demonstrate, for the first time, a novel fungicidal effect of carnivorous plant extract on the human pathogen Candida albicans.

PGPUB-DOCUMENT-NUMBER: 20020086008

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020086008 A1

TITLE: Human chitinase, its recombinant production, its use for decomposing chitin, its use in therapy or prophylaxis against infection diseases

PUBLICATION-DATE: July 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Aerts, Johannes Maria Franciscus Gerardus	Abcoude		NL	

APPL-NO: 09/ 977827

DATE FILED: October 15, 2001

RELATED-US-APPL-DATA:

child 09977827 A1 20011015

parent continuation-of 09343623 19990630 US GRANTED

parent-patent 6303118 US

US-CL-CURRENT: 424/94.61, 435/200 , 435/320.1 , 435/325 , 435/69.1 , 536/23.2

ABSTRACT:

A human chitinase, its recombinant production, its use for decomposing chitin, its use in therapy or prophylaxis against infection diseases
A new human chitinase having an amino acid sequence as shown in FIG. 1 or FIG. 2. Modified forms of it having a similar chitin-hydrolyzing activity, and antigenic peptides representing one of its epitopes. Recombinant production of the human chitinase by genetically engineered hosts or host cells. Recombinant nucleic acid encoding it, and human chitinase-specific oligonucleotides. Use for therapeutic or prophylactic treatment of humans against infection by chitin-containing pathogens, or for decomposing chitin, e.g. from chitin-based articles. Antibodies binding to the human chitinase. Diagnostic test kits comprising the human chitinase, its antigenic peptides, human chitinase antibodies, recombinant nucleic acid or oligonucleotides.

---------- KWIC ---------

Detail Description Paragraph - DETX (83):
[0160] To test whether human chitotriosidase can exert an antifungal action, a chitinous fungus (Mucor mucedo) was grown on plates (containing malt extract, peptone, glucose and agar) under a Cellophane membrane in order to keep the hyphae flat against the agar surface (see ref.16) . Individual sectors were cut out and mounted on microscope slides. Purified chitozyme 50 and chitozyme 39 were dialysed against 0.15 M sodium chloride. Samples of enzyme-containing solutions, and 0.15 M NaCl were pipetted on the hyphal tips. Microscopical

analysis revealed that application of enzyme resulted in immediate cessation of hyphal growth, followed by a distorted morphological appearance. Application of saline had no effect. Negative effects on hyphal growth were detectable using chitozyme solutions with a concentration of enzyme as little as 0.005 mg/ml.

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2420	chitinase$1 or chitotriosidase$1	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:13
L2	39	1 near4 human	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:13
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L4	88	1 same (cosemetic$1 or dental or toothpaste$1 or food)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:19
L5	212	1 same antifung$	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:20
L6	18	5 same (human or mammal$)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:21
L7	53946	drug same (deliver$ or release or implant)	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:23
L8	13	1 same 7	US-PGPUB; USPAT	OR	OFF	2004/06/02 09:23

PGPUB-DOCUMENT-NUMBER: 20040078842

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040078842 A1

TITLE: Chitinases, derived from carnivorous plants polynucleotide sequences encoding thereof, and methods of isolating and using same

PUBLICATION-DATE: April 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Zilberstein, Aviah	Holon	IL		
Eilenberg, Haviva	Ramat Hasharon	IL		
Schuster, Silvia	Raanana	IL		

APPL-NO: 10/ 451794

DATE FILED: November 24, 2003

PCT-DATA:
APPL-NO: PCT/IL02/00044
DATE-FILED: Jan 17, 2002
PUB-NO:
PUB-DATE:
371-DATE:
102(E)-DATE:

US-CL-CURRENT: 800/279, 424/94.61 , 435/200

ABSTRACT:

The present invention provides an enzymatic composition comprising at least one protein isolated from a tissue or soup of a carnivorous plant, the at least one protein being characterized with an endo-chitinase activity.

---------- KWIC ---------

Detail Description Paragraph - DETX (166):
[0260] The present invention may also have additional related applications. Chitinases of the present invention can be used as a tool to degrade injected or implanted chitin-based structures for medical purposes. For example, drugs could be incorporated in chitin based capsules (`chitosomes`). The concomitant presence of well defined amounts of the chitinases of the present invention in the capsule could ensure a controlled release of drugs. A slow but gradual release of drug could particularly be envisioned when it is trapped in a chitin matrix. The use of the chitinase enzyme in such a system would result in ultimate destruction of the chitin-based capsule and not elicit an immunological response. The drugs used in such a system could vary from small compounds to proteins and DNA fragments for the purpose of enzyme and gene therapy.

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  * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * *

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       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 09:27:57 ON 02 JUN 2004
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11 FILES IN THE FILE LIST

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FILE 'MEDLINE'
          1720 CHITINASE#
            82 CHITOTRIOSIDASE#
L1        1776 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'SCISEARCH'
          3394 CHITINASE#
           121 CHITOTRIOSIDASE#
L2        3457 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'LIFESCI'
          1608 CHITINASE#
            11 CHITOTRIOSIDASE#
L3        1610 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'BIOTECHDS'
          1010 CHITINASE#
             3 CHITOTRIOSIDASE#
L4        1012 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'BIOSIS'
          3911 CHITINASE#
           100 CHITOTRIOSIDASE#
L5        3987 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'EMBASE'
          1270 CHITINASE#
            69 CHITOTRIOSIDASE#
L6        1310 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'HCAPLUS'
          4681 CHITINASE#
            73 CHITOTRIOSIDASE#
L7        4723 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'NTIS'
            30 CHITINASE#
             0 CHITOTRIOSIDASE#
L8           30 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'ESBIOBASE'
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            52 CHITOTRIOSIDASE#
L9        1538 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'BIOTECHNO'
          1420 CHITINASE#
            36 CHITOTRIOSIDASE#
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L10       1435 CHITINASE# OR CHITOTRIOSIDASE#

FILE 'WPIDS'
           497 CHITINASE#
             7 CHITOTRIOSIDASE#
L11        501 CHITINASE# OR CHITOTRIOSIDASE#

TOTAL FOR ALL FILES
L12      21379 CHITINASE# OR CHITOTRIOSIDASE#

=> s l12(5a)human
FILE 'MEDLINE'
       8539295 HUMAN
L13          44 L1 (5A)HUMAN

FILE 'SCISEARCH'
       1107980 HUMAN
L14          51 L2 (5A)HUMAN

FILE 'LIFESCI'
        339115 HUMAN
L15          23 L3 (5A)HUMAN

FILE 'BIOTECHDS'
         64163 HUMAN
L16          15 L4 (5A)HUMAN

FILE 'BIOSIS'
       6257623 HUMAN
L17          66 L5 (5A)HUMAN

FILE 'EMBASE'
       5044544 HUMAN
L18          36 L6 (5A)HUMAN

FILE 'HCAPLUS'
       1275803 HUMAN
L19          82 L7 (5A)HUMAN

FILE 'NTIS'
         82890 HUMAN
L20           0 L8 (5A)HUMAN

FILE 'ESBIOBASE'
        396618 HUMAN
L21          32 L9 (5A)HUMAN

FILE 'BIOTECHNO'
        735552 HUMAN
L22          32 L10(5A)HUMAN

FILE 'WPIDS'
        144951 HUMAN
L23          13 L11(5A)HUMAN

TOTAL FOR ALL FILES
L24         394 L12(5A) HUMAN

=> s l24 not 1996-2004/py
FILE 'MEDLINE'
       4076916 1996-2004/PY
L25           6 L13 NOT 1996-2004/PY

FILE 'SCISEARCH'
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       8132417 1996-2004/PY
L26          8 L14 NOT 1996-2004/PY

FILE 'LIFESCI'
        896495 1996-2004/PY
L27          4 L15 NOT 1996-2004/PY

FILE 'BIOTECHDS'
        142637 1996-2004/PY
L28          0 L16 NOT 1996-2004/PY

FILE 'BIOSIS'
       4621804 1996-2004/PY
L29         10 L17 NOT 1996-2004/PY

FILE 'EMBASE'
       3631248 1996-2004/PY
L30          7 L18 NOT 1996-2004/PY

FILE 'HCAPLUS'
       7432666 1996-2004/PY
L31          7 L19 NOT 1996-2004/PY

FILE 'NTIS'
        194328 1996-2004/PY
L32          0 L20 NOT 1996-2004/PY

FILE 'ESBIOBASE'
       2284433 1996-2004/PY
L33          5 L21 NOT 1996-2004/PY

FILE 'BIOTECHNO'
        931657 1996-2004/PY
L34          6 L22 NOT 1996-2004/PY

FILE 'WPIDS'
       6136523 1996-2004/PY
L35          0 L23 NOT 1996-2004/PY

TOTAL FOR ALL FILES
L36         53 L24 NOT 1996-2004/PY

=> s l12 and antifungal and (human or mammal?)
FILE 'MEDLINE'
         26315 ANTIFUNGAL
       8539295 HUMAN
        138180 MAMMAL?
L37          21 L1 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'SCISEARCH'
         15396 ANTIFUNGAL
       1107980 HUMAN
        150645 MAMMAL?
L38          27 L2 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'LIFESCI'
          9434 ANTIFUNGAL
        339115 HUMAN
         68513 MAMMAL?
L39          10 L3 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'BIOTECHDS'
          1173 ANTIFUNGAL
         64163 HUMAN
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         72175 MAMMAL?
L40          4 L4 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'BIOSIS'
         33103 ANTIFUNGAL
       6257623 HUMAN
       9571118 MAMMAL?
L41         28 L5 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'EMBASE'
         23503 ANTIFUNGAL
       5044544 HUMAN
        129806 MAMMAL?
L42         18 L6 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'HCAPLUS'
         23471 ANTIFUNGAL
       1275803 HUMAN
        229694 MAMMAL?
L43         27 L7 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'NTIS'
           130 ANTIFUNGAL
         82890 HUMAN
          7570 MAMMAL?
L44          0 L8 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'ESBIOBASE'
          4848 ANTIFUNGAL
        396618 HUMAN
         75301 MAMMAL?
L45         15 L9 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'BIOTECHNO'
          3941 ANTIFUNGAL
        735552 HUMAN
         56089 MAMMAL?
L46         13 L10 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

FILE 'WPIDS'
          9931 ANTIFUNGAL
        144951 HUMAN
         37955 MAMMAL?
L47         13 L11 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

TOTAL FOR ALL FILES
L48        176 L12 AND ANTIFUNGAL AND (HUMAN OR MAMMAL?)

=> s l48 not 1996-2004/py
FILE 'MEDLINE'
       4076916 1996-2004/PY
L49          1 L37 NOT 1996-2004/PY

FILE 'SCISEARCH'
       8132417 1996-2004/PY
L50          2 L38 NOT 1996-2004/PY

FILE 'LIFESCI'
        896495 1996-2004/PY
L51          2 L39 NOT 1996-2004/PY

FILE 'BIOTECHDS'
        142637 1996-2004/PY
L52          0 L40 NOT 1996-2004/PY
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FILE 'BIOSIS'
       4621804 1996-2004/PY
L53           3 L41 NOT 1996-2004/PY

FILE 'EMBASE'
       3631248 1996-2004/PY
L54           0 L42 NOT 1996-2004/PY

FILE 'HCAPLUS'
       7432666 1996-2004/PY
L55           1 L43 NOT 1996-2004/PY

FILE 'NTIS'
        194328 1996-2004/PY
L56           0 L44 NOT 1996-2004/PY

FILE 'ESBIOBASE'
       2284433 1996-2004/PY
L57           0 L45 NOT 1996-2004/PY

FILE 'BIOTECHNO'
        931657 1996-2004/PY
L58           0 L46 NOT 1996-2004/PY

FILE 'WPIDS'
       6136523 1996-2004/PY
L59           0 L47 NOT 1996-2004/PY

TOTAL FOR ALL FILES
L60           9 L48 NOT 1996-2004/PY

=> s l36 or l60
FILE 'MEDLINE'
L61           7 L25 OR L49

FILE 'SCISEARCH'
L62          10 L26 OR L50

FILE 'LIFESCI'
L63           6 L27 OR L51

FILE 'BIOTECHDS'
L64           0 L28 OR L52

FILE 'BIOSIS'
L65          13 L29 OR L53

FILE 'EMBASE'
L66           7 L30 OR L54

FILE 'HCAPLUS'
L67           8 L31 OR L55

FILE 'NTIS'
L68           0 L32 OR L56

FILE 'ESBIOBASE'
L69           5 L33 OR L57

FILE 'BIOTECHNO'
L70           6 L34 OR L58

FILE 'WPIDS'
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